

IN THE CLAIMS:

Please cancel claims 40-47 without prejudice or disclaimer, amend claims 22 and 50-52, and add new claims 55-58 as follows:

- 1-21. (Cancelled)
22. (Currently Amended) A crystal growing method comprising the steps of:
forming a step-terrace structure that is flat at an atomic level on a SiC surface
and then removing an oxide film, which is naturally formed thereon and covers the
step-terrace structure, from ~~[[on]]~~ the surface; ~~[[and]]~~
after the forming and then removing step, performing at least one cycle of a
process of irradiation of including irradiating Si or Ga atomic beam on the surface
and then heating the irradiated surface thereby separating said Ga or Si from the
irradiated surface and removing oxygen on the surface;[[,]] and [[then]]
after the performing step, growing a Group-III nitride on the surface without
said Ga or Si left in-between.
23. (Previously Presented) The crystal growing method according to claim 22, wherein
the step of irradiation of Si or Ga is performed under high vacuum.
24. (Previously Presented) The crystal growing method according to claim 22, wherein
the high vacuum is 10^{-6} Pa or less.
25. (Currently Amended) The crystal growing method according to ~~any one of~~ claim 22,
wherein the step of growing a Group-III nitride is performed at a temperature lower
than the temperature of the substrate during the heating step.
26. (Currently Amended) The crystal growing method according to ~~any one of~~ claim 22,
wherein said SiC surface has an offset angle of 0 to 15° with respect to the (0001) Si
or (000—1) C plane.
27. (Withdrawn) A crystal growing method comprising the steps of:
forming a flat and clean SiC surface; and

growing a Group-III nitride, wherein nitrogen is fed after a Group III element has been fed.

28. (Withdrawn) A crystal growing method comprising the steps of:
removing an oxide film from the surface and forming a flat and clean SiC surface; and
growing a Group-III nitride, wherein nitrogen is fed after a Group III element of an amount corresponding to a single monolayer or of a smaller amount has been fed to said clean SiC surface.
29. (Withdrawn) The crystal growing method according to claim 27, wherein the step of growing said Group-III nitride is performed under high vacuum.
30. (Withdrawn) The crystal growing method according to claim 29, wherein the high vacuum is 10^{-2} Pa or less.
31. (Withdrawn) The crystal growing method according to claim 28, wherein the step of growing said Group-III nitride is performed under high vacuum.
32. (Withdrawn) The crystal growing method according to claim 31, wherein the high vacuum is 10^{-2} Pa or less.
33. (Withdrawn) The crystal growing method according to any one of claim 27, wherein said SiC surface has an offset angle of 0 to 15° with respect to the (0001) Si or (000—1) C plane.
34. (Withdrawn) The crystal growing method according to any one of claim 28, wherein said SiC surface has an offset angle of 0 to 15° with respect to the (0001) Si or (000—1) C plane.
35. (Withdrawn) A crystal growing method comprising the steps of:
forming a flat and clean SiC surface;

growing a Group-III nitride, wherein a surface control element for controlling the mode of crystal growth of said Group-III nitride on the SiC surface is fed first; and feeding a Group III element and nitrogen, followed by the termination of the feeding of said surface control element.

36. (Withdrawn) The crystal growing method according to claim 35, wherein said surface controlling element is Ga or In.
37. (Withdrawn) The crystal growing method according to claim 35, wherein the step of growing the Group-III nitride is performed under high vacuum.
38. (Withdrawn) The crystal growing method according to claim 37, wherein said high vacuum is 10^{-2} Pa or less.
39. (Withdrawn) The crystal growing method according to any one of claim 35, wherein said SiC surface has an offset angle of 0 to 15° with respect to the (0001) Si or (000-1) C plane.
- 40-47. (Cancelled)
48. (Withdrawn) A stacked structure comprising:
 - a SiC layer;
 - a Group-III nitride layer; and
 - Ga atoms or In atoms remaining between said SiC layer and said Group-III nitride layer.
49. (Withdrawn) A stacked structure comprising:
 - a SiC layer;
 - an AlN layer; and
 - Ga atoms or In atoms on the ppm order remaining between said SiC layer and said AlN layer.

50. (Currently Amended) ~~[[The]]~~ A crystal growing method ~~according to claim 47,~~ comprising the steps of:

forming a step-terrace structure on said SiC surface; ~~and removing an oxide film on said surface;~~ ~~[[and]]~~

removing an oxide film which is naturally formed on said surface in an atmosphere of reduced oxygen partial pressure and covers the step-terrace structure;

after the removing step, performing at least one cycle of a process including irradiating Si or Ga atomic beam on the surface and then heating the irradiated surface thereby separating said Ga or Si from the irradiated surface and removing oxygen on the surface and forming to provide a flat and clean SiC surface~~[[,]]~~;

~~wherein the step of~~ after the performing step, growing a Group-III nitride on the surface without said Ga or Si left in-between while the step-terrace structure is maintained, by feeding a Group III element and ~~comprises the step of feeding nitrogen after the Group III element has been fed.~~

51. (Currently Amended) The crystal growing method according to claim ~~[[47]]~~22, comprising:

~~removing an oxide film on said surface and forming a flat and clean SiC surface;~~

wherein the Group-III nitride contains Al, and the step of growing a Group-III nitride is conducted under high vacuum and comprises the steps of:

feeding Ga or In as a surface controlling element for controlling the mode of crystal growth to be layer-by-layer of the Group-III nitride on said SiC surface ~~[[first]]~~; and then

feeding a Group III element and nitrogen, followed by the termination of the feeding of said surface controlling element.

52. (Currently Amended) The crystal growing method according to claim ~~[[47]]~~ 51, wherein the step of removing the oxide film comprises the step of removing the oxide film on the surface using a solution containing fluorine in an atmosphere of reduced oxygen partial pressure, ~~and then growing the Group-III nitride.~~

53. (Withdrawn) A heterojunction MISFET comprising:
- a SiC substrate;
 - an AlN layer formed by forming a step-terrace structure on a SiC surface and then removing an oxide film on the surface, performing at least one cycle of a process of irradiation of Si or Ga and then heating, and growing a Group-III nitride;
 - a gate electrode formed on said AlN layer; and
 - a source and a drain formed on either side of said gate electrode.
54. (Withdrawn) A heterojunction laser device comprising:
- a SiC substrate;
 - an MN buffer layer formed by forming a step-terrace structure on a SiC surface and then removing an oxide film on the surface, performing at least one cycle of a process of irradiation of Si or Ga and then heating, and growing a Group-III nitride;
 - a first AlGaN cladding layer formed on said AlN layer;
 - a GaN/InGaN multiquantum well structure; and
 - a second AlGaN cladding layer formed on said multiquantum well structure.
55. (New) The crystal growing method according to claim 51, wherein the surface controlling element is either fed in a form of gas or irradiated on the surface in a form of an atomic beam.
56. (New) A crystal growing method according to claim 22, wherein said SiC surface has an offset angle of 0-15° with respect to the (0001) Si or (000-1) C plane.
57. (New) The crystal growing method according to claim 50, wherein said SiC surface has an offset angle of 0-15° with respect to the (0001) Si or (000-1) C plane.
58. (New) The crystal growing method according to claim 51, wherein said SiC surface has an offset angle of 0-15° with respect to the (0001) Si or (000-1) C plane.